**Properties of carbon compounds (Level 1) examiners tips: Read these please!**

• The bond between atoms (intramolecular) is a strong covalent bond

• The force between molecules (intermolecular) is very weak

**melting and boiling points**

• melting point is the temperature at which all of the substance has changed from a solid to a liquid state

• boiling point is the temperature at which all of the substance has changed from a liquid to a gas state

*trend*: As the length of the carbon chain **increases** the melting and boiling points **also increase**.

*explanation:* The longer the carbon chain,

the greater the number of weak intermolecular forces between molecules,

so there is a greater force of attraction between molecules,

therefore more heat energy is required to overcome/break those forces and separate the molecules,

so the melting/boiling point of the hydrocarbon is higher

**solubility**

• hydrocarbons (alkanes and alkenes) are not soluble in water• alcohols (up to butanol) are soluble in water

• immiscible solutions don't mix eg *oil and water*

**Also…”don’t be daft”**

melting point is NOT THE SAME as boiling point

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